

# Single Plate Capacitive Acceleration Derivative Detector

## Abstract

A capacitance accelerometer includes a housing, and a plate fixed within the housing. A moveable plate is disposed in substantially parallel relation to the fixed plate and is coupled to the housing along at least an edge. The moveable plate and the fixed plate define a distance. The distance varies in response to acceleration forces acting upon the moveable plate, and wherein the moveable plate and the fixed plate generate a charge displacement capacitance signal. A transimpedance amplifier receives the charge displacement capacitance signal and generates a scaled voltage signal therefrom. An acceleration signal is generated from the scaled voltage signal.